



# Where are we heading? Paths to mobility of tomorrow

## The 2018 Continental Mobility Study

December 2018

# Continental Mobility Study 2018:

## Focal topics

Project Scope

Statements about Car Driving

Attitude Towards Driver Assistance Systems and Automated Driving

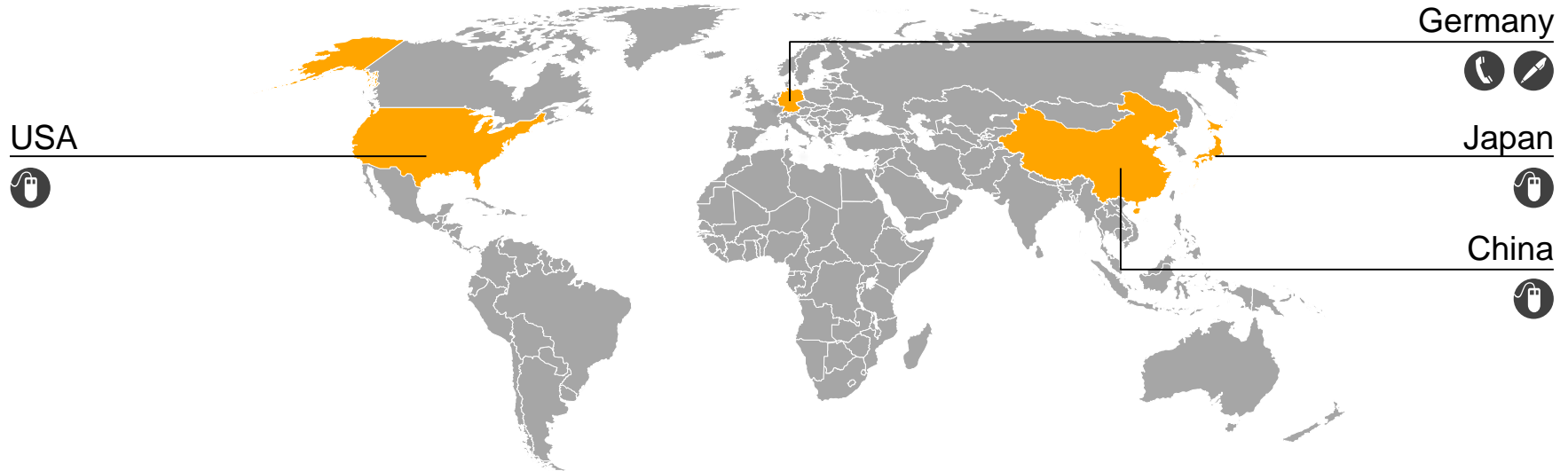
Assessment of Connectivity Applications

Suitable Mobility Solutions

Attitude Towards the Different Drivetrain Options

# Project Scope

# International Perspective: population interviews in June 2018



☎ Representative telephone interviews (1,015)      📺 Representative online interviews (1,050 per country)      ✍ Interviews with experts

# Target Groups:

## Population, driver and non-driver



Representative for population from 16 years on



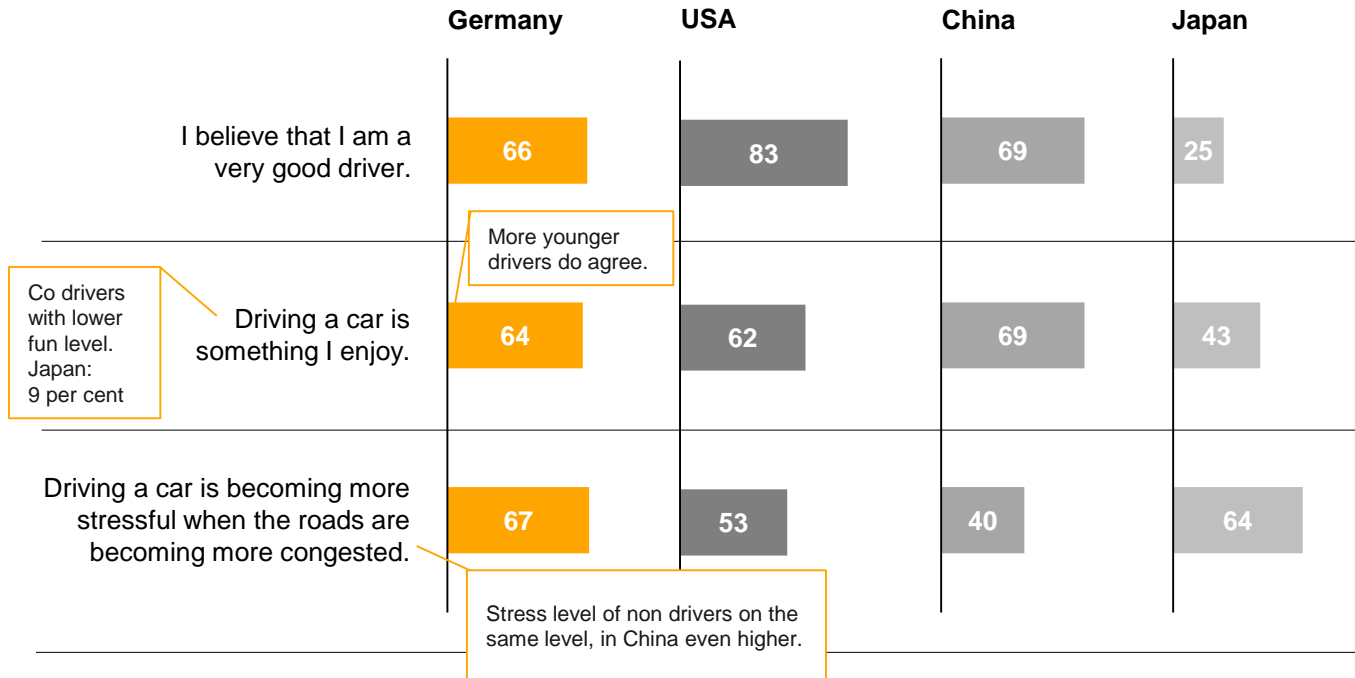
Subgroup of the population that drives regularly a car (at least once a month)




Subgroup of the population that does not drive

# Statements about Car Driving

# Agreement to Statements about Car Driving: Something to enjoy, but stressful in Germany and Japan?

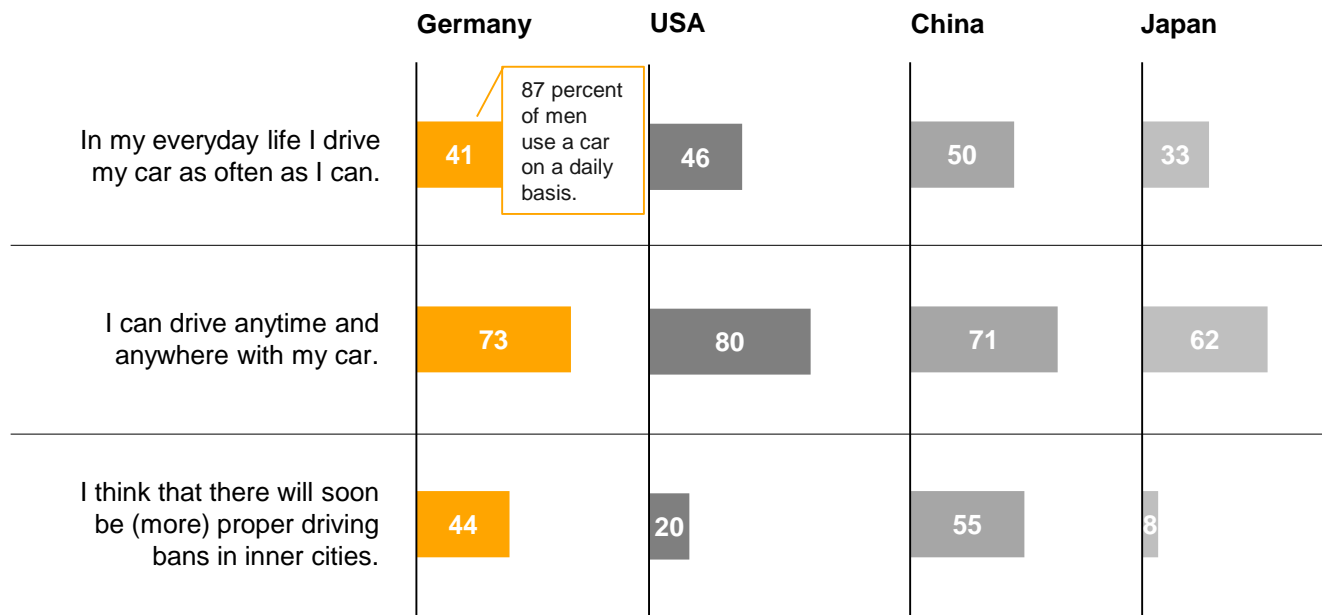




 Driver Representative

**Question:** Please tell me for each statement to what extent you agree or disagree.

figures in percent, top box displayed (4 + 5), scale "0: completely disagree" to "5: completely agree"

# Agreement to Statements about Car Driving: Many feel free to drive anytime and anywhere



 Driver  
 Representative

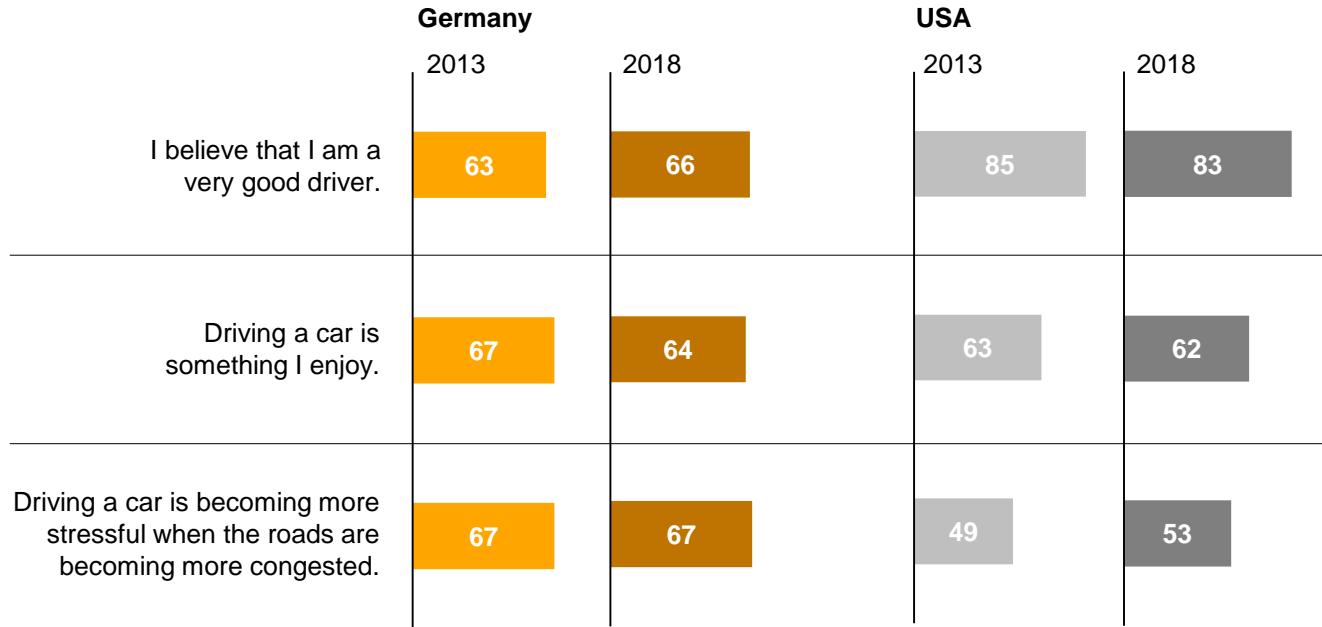
**Question:** Please tell me for each statement to what extent you agree or disagree.

figures in percent, top box displayed (4 + 5), scale "0: completely disagree" to "5: completely agree"



# Statements about Car Driving – Germany and USA:

## Not much difference in the results within last 5 years



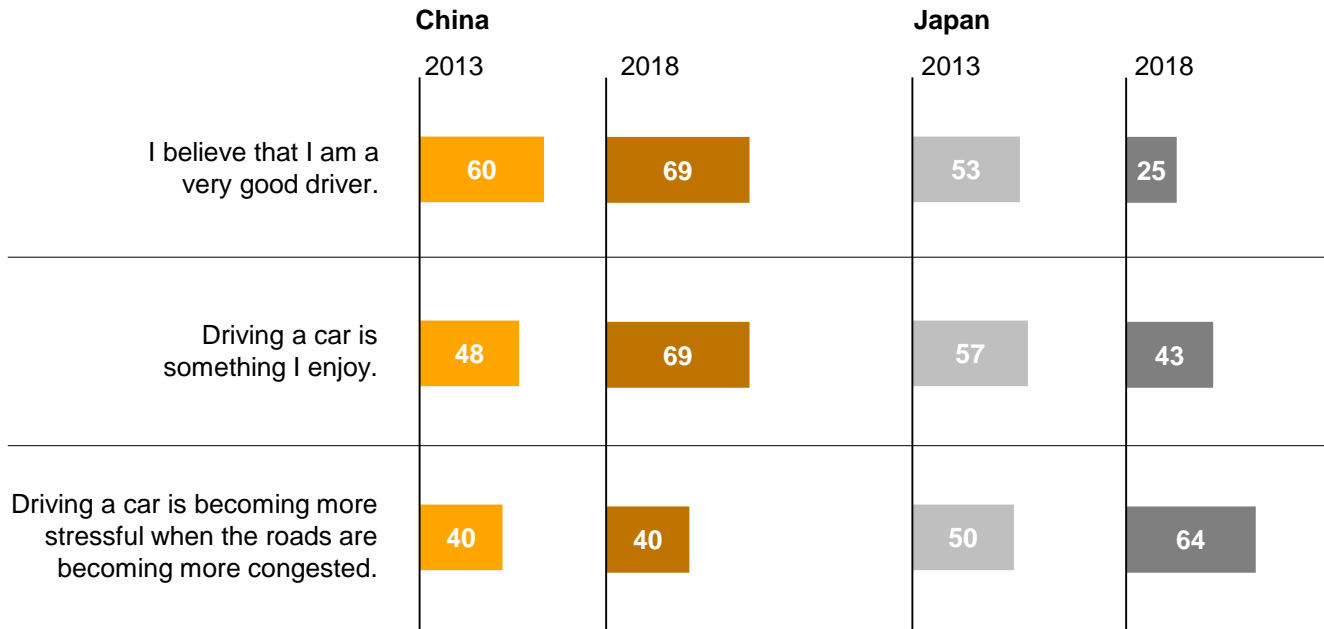
 time comparison  
 Driver  
 Representative




**Question:** Please tell me for each statement to what extent you agree or disagree.

figures in percent, top box displayed (4 + 5), scale "0: completely disagree" to "5: completely agree"

# Statements about Car Driving – China and Japan:

## Driving becomes more joyful in China within the past 5 years



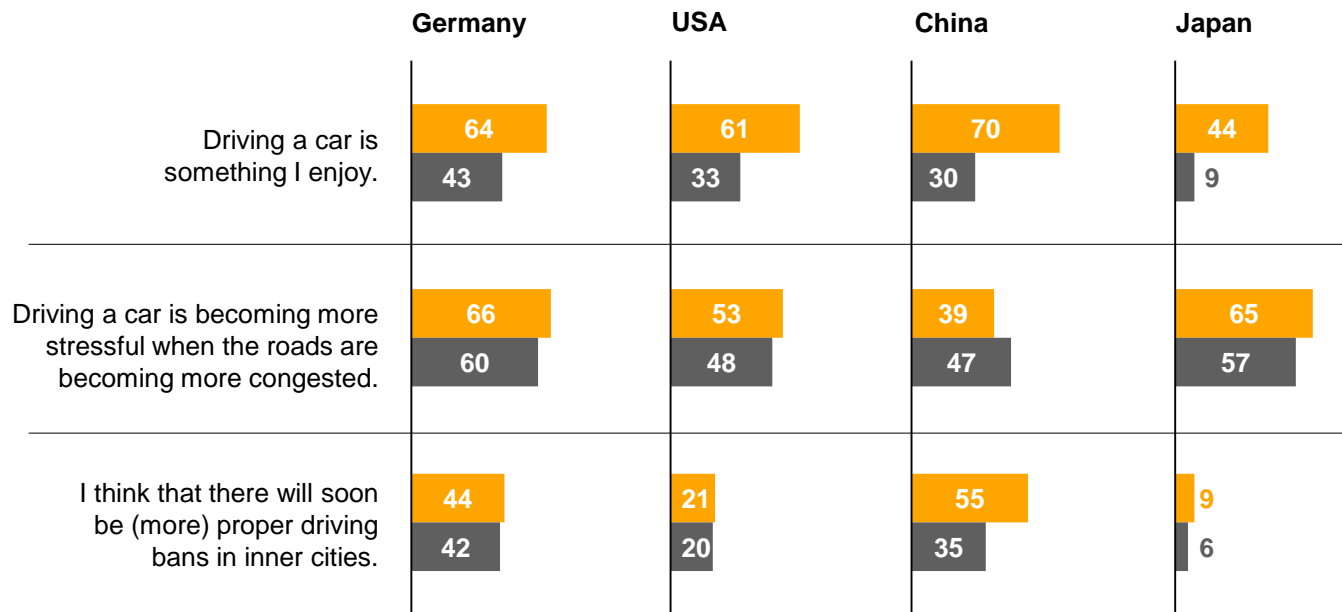
 time comparison  
 Driver  
 Representative


**Question:** Please tell me for each statement to what extent you agree or disagree.

figures in percent, top box displayed (4 + 5), scale "0: completely disagree" to "5: completely agree"



# Agreement to Statements about Car Driving:

## Driver and non-driver with different answers, incl. bans



 Driver  
 Non-Driver  
 Representative

**Question:** Please tell me for each statement to what extent you agree or disagree.

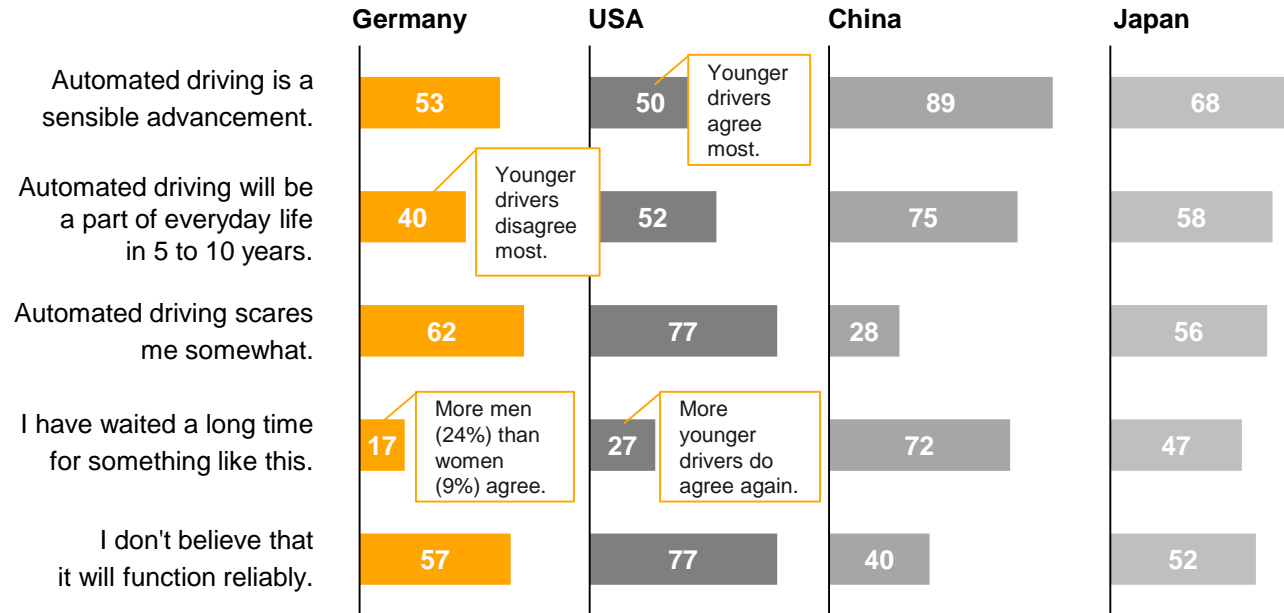
 Driver  
 Non-driver

figures in percent, top box displayed (4 + 5), scale "0: completely disagree" to "5: completely agree"

# Attitude Towards Driver Assistance Systems and Automated Driving

# Attitudes towards Automated Driving:

## From drivers' perspective there are a few Pros and Cons

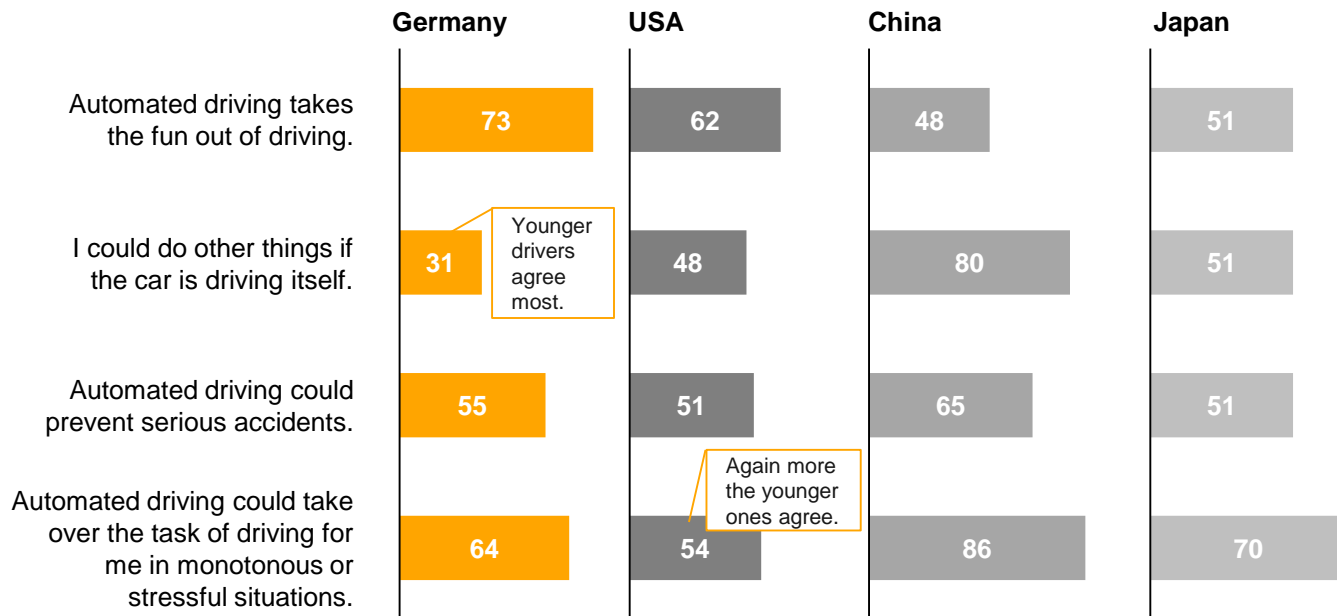



Driver Representative

**Question:** Within the next five to ten years there will be cars which can drive themselves so that the driver can spend some of the journey time doing other things. People can have different opinions about automated driving. For each statement, please tell me to what extent you agree or disagree.

figures in percent, share of "yes, I tend to agree" displayed

# Attitudes towards Automated Driving: Drivers in fear of losing fun



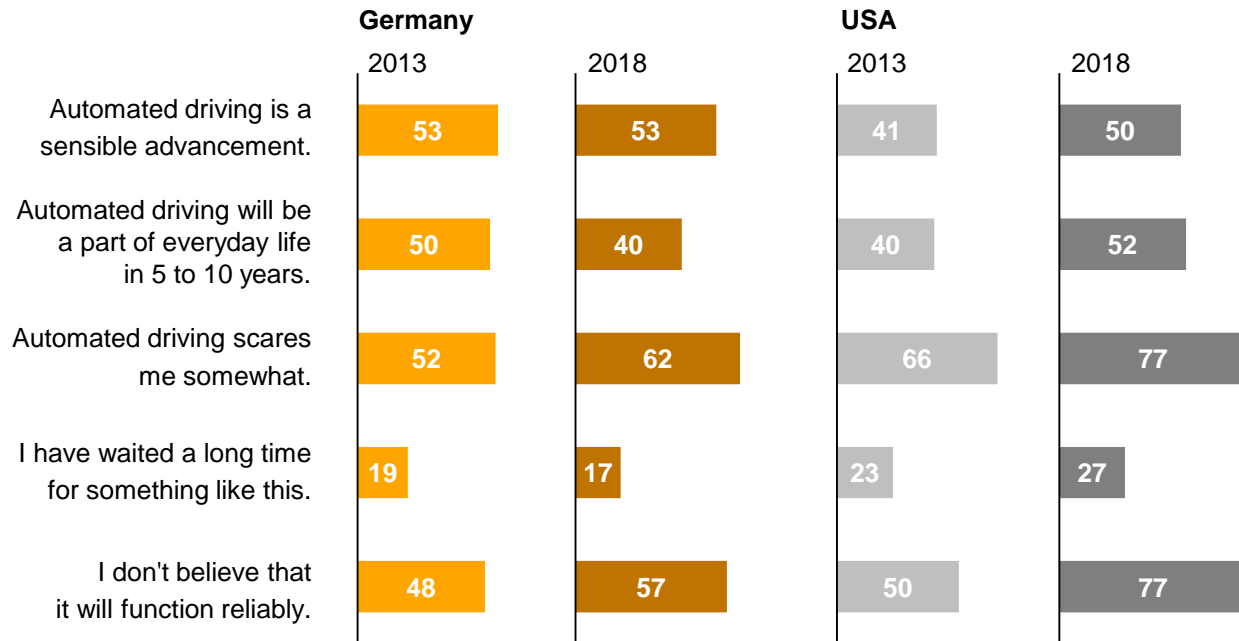
 Driver  
**R**epresentative




**Question:** Within the next five to ten years there will be cars which can drive themselves so that the driver can spend some of the journey time doing other things. People can have different opinions about automated driving. For each statement, please tell me to what extent you agree or disagree.

figures in percent, share of "yes, I tend to agree" displayed

# Attitudes towards Automated Driving:

## Americans get more scared – due to some accidents?



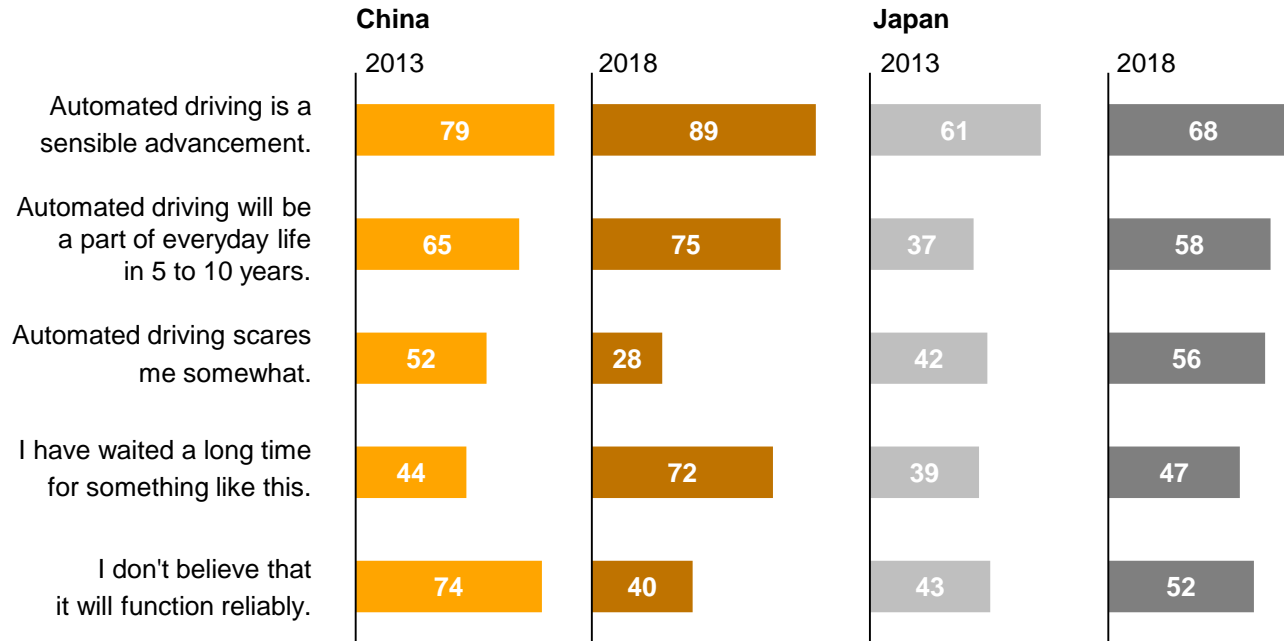
 time comparison  
 Driver  
 Representative


**Question:** Within the next five to ten years there will be cars which can drive themselves so that the driver can spend some of the journey time doing other things. People can have different opinions about automated driving. For each statement, please tell me to what extent you agree or disagree.


figures in percent, share of "yes, I tend to agree" displayed


# Attitudes towards Automated Driving:

## Now even more optimism in China than 5 years ago



 time comparison

 Driver

 Representative

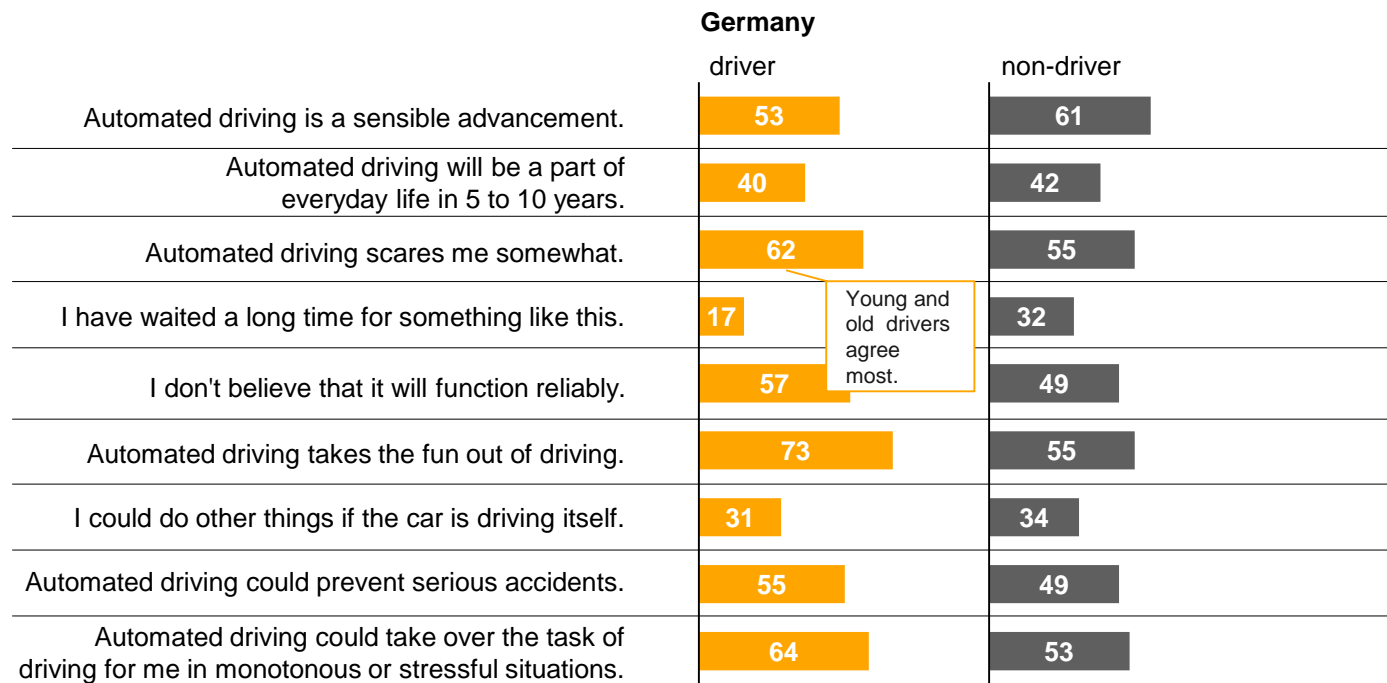
**Question:** Within the next five to ten years there will be cars which can drive themselves so that the driver can spend some of the journey time doing other things. People can have different opinions about automated driving. For each statement, please tell me to what extent you agree or disagree.




figures in percent, share of "yes, I tend to agree" displayed



# Attitudes towards Automated Driving – Germany:

## More non-drivers awaiting AD



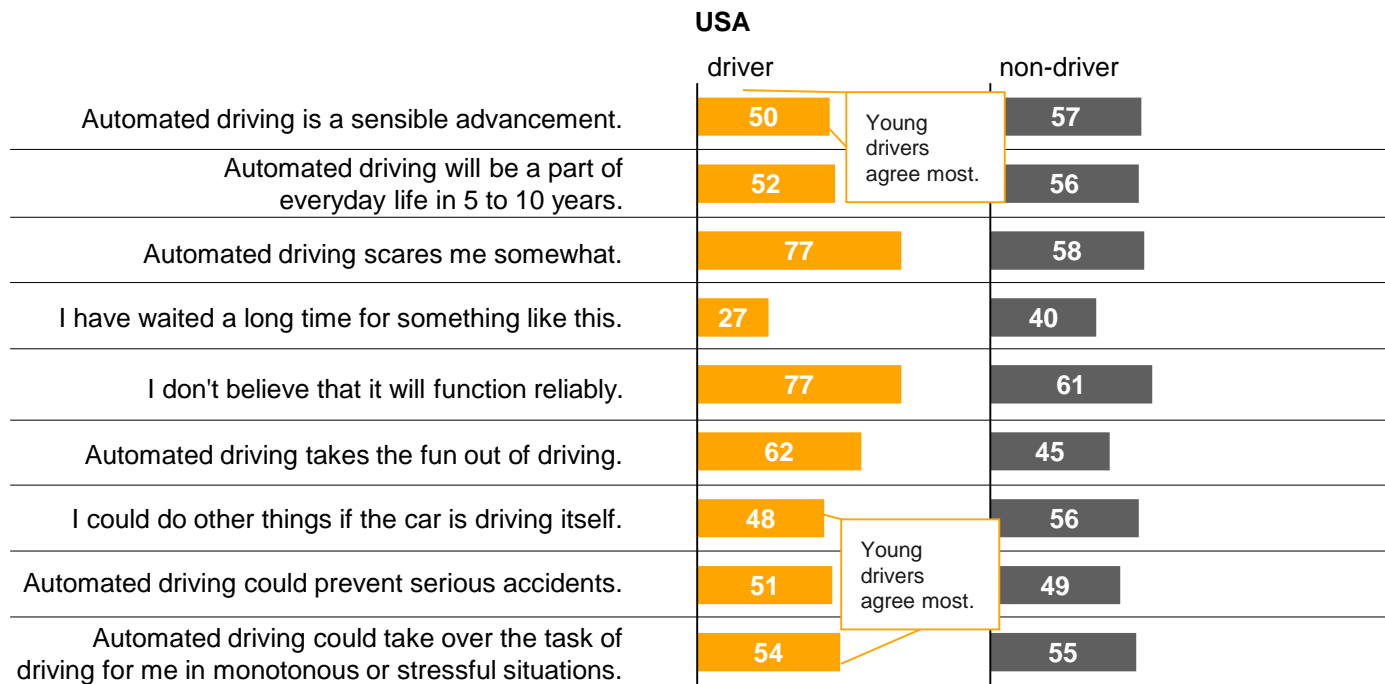
 Driver
  Non-Driver
  Representative




**Question:** Within the next five to ten years there will be cars which can drive themselves so that the driver can spend some of the journey time doing other things. People can have different opinions about automated driving. For each statement, please tell me to what extent you agree or disagree.

figures in percent, share of "yes, I tend to agree" displayed

# Attitudes towards Automated Driving – USA:

## Especially the drivers think that it will function unreliable



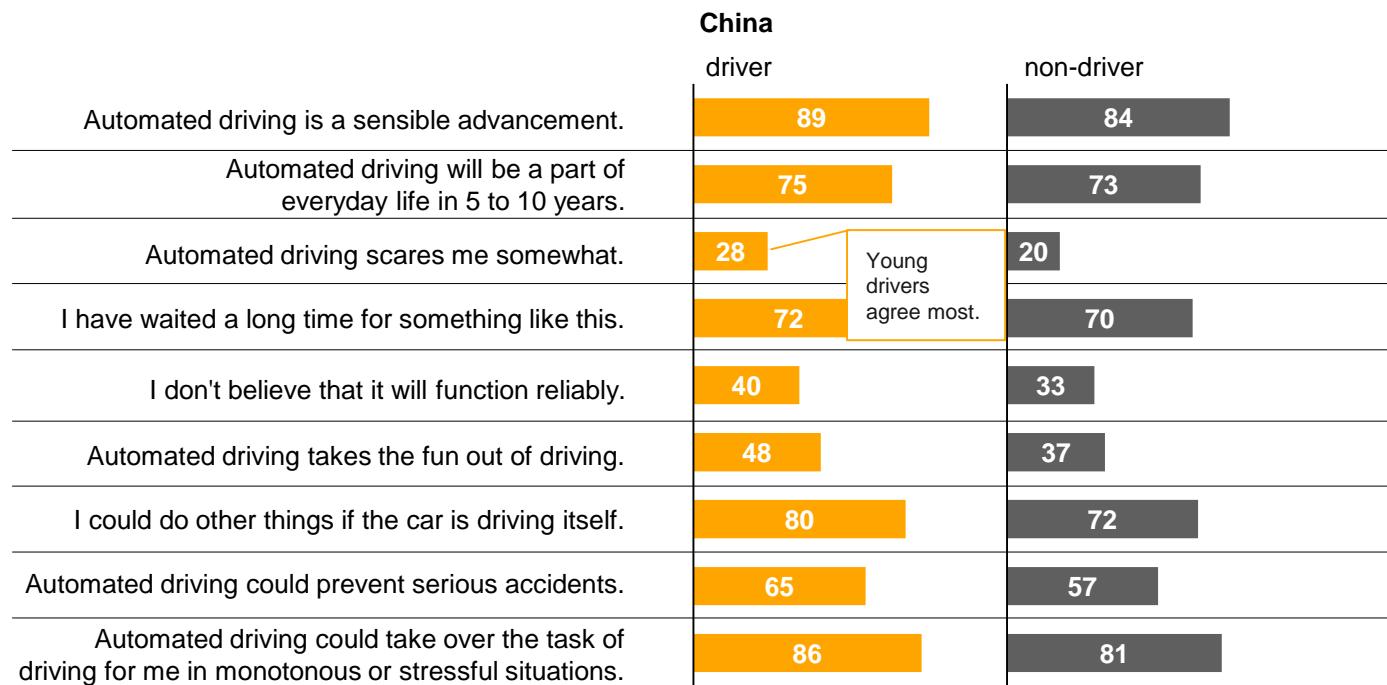
 Driver  
 Non-Driver  
 Representative

**Question:** Within the next five to ten years there will be cars which can drive themselves so that the driver can spend some of the journey time doing other things. People can have different opinions about automated driving. For each statement, please tell me to what extent you agree or disagree.

figures in percent, share of "yes, I tend to agree" displayed

# Attitudes towards Automated Driving – China:

## Drivers and non-drivers are both answering positive

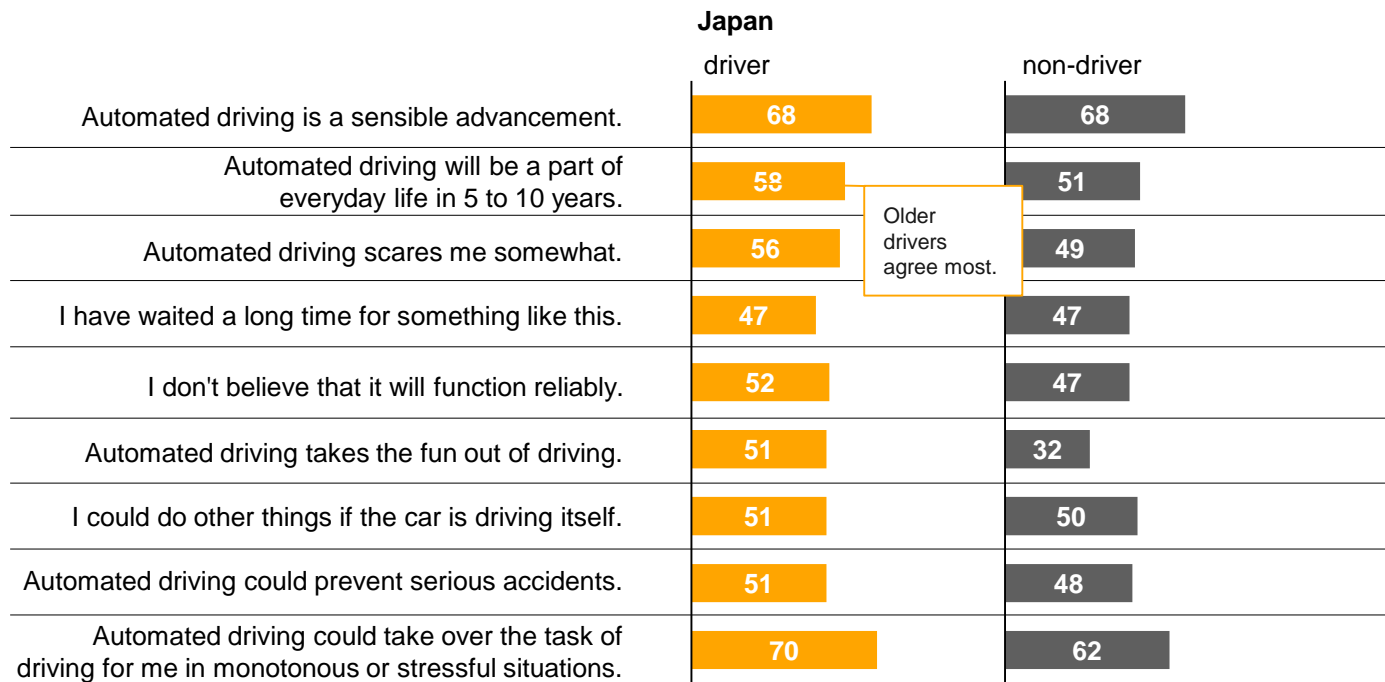



**Question:** Within the next five to ten years there will be cars which can drive themselves so that the driver can spend some of the journey time doing other things. People can have different opinions about automated driving. For each statement, please tell me to what extent you agree or disagree.

figures in percent, share of "yes, I tend to agree" displayed

# Attitudes towards Automated Driving – Japan:

## Drivers are more fearful of losing the fun

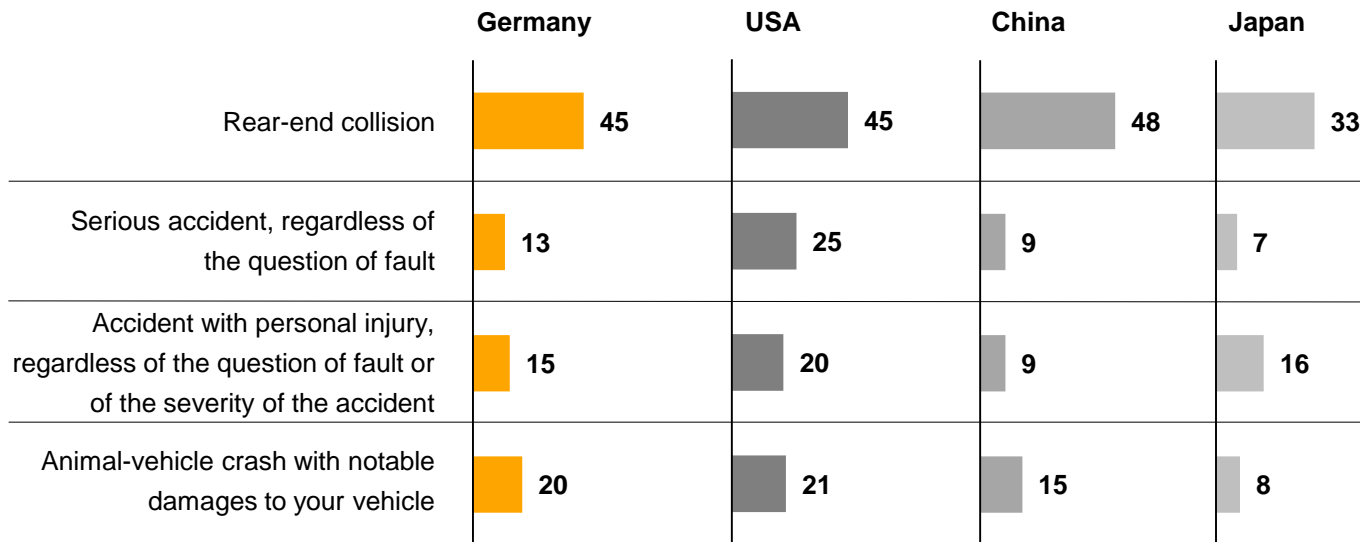




**Question:** Within the next five to ten years there will be cars which can drive themselves so that the driver can spend some of the journey time doing other things. People can have different opinions about automated driving. For each statement, please tell me to what extent you agree or disagree.


figures in percent, share of "yes, I tend to agree" displayed

# Experiences with Severe Accidents:

## Many drivers have been involved at least once



 Driver

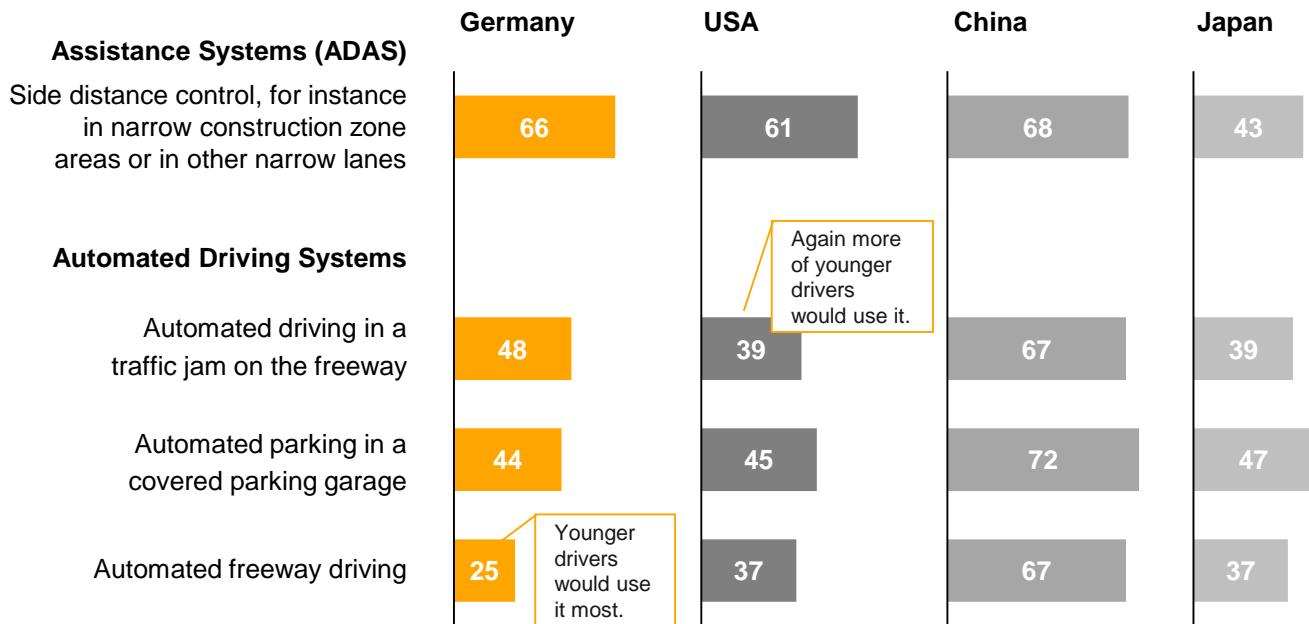
 Representative


**Question:** Which of the following situations has ever happened to you as a driver?

figures in percent, share of "yes" displayed

# Intention to Use Automated Systems in the Future:

## Chinese drivers are open-minded for this

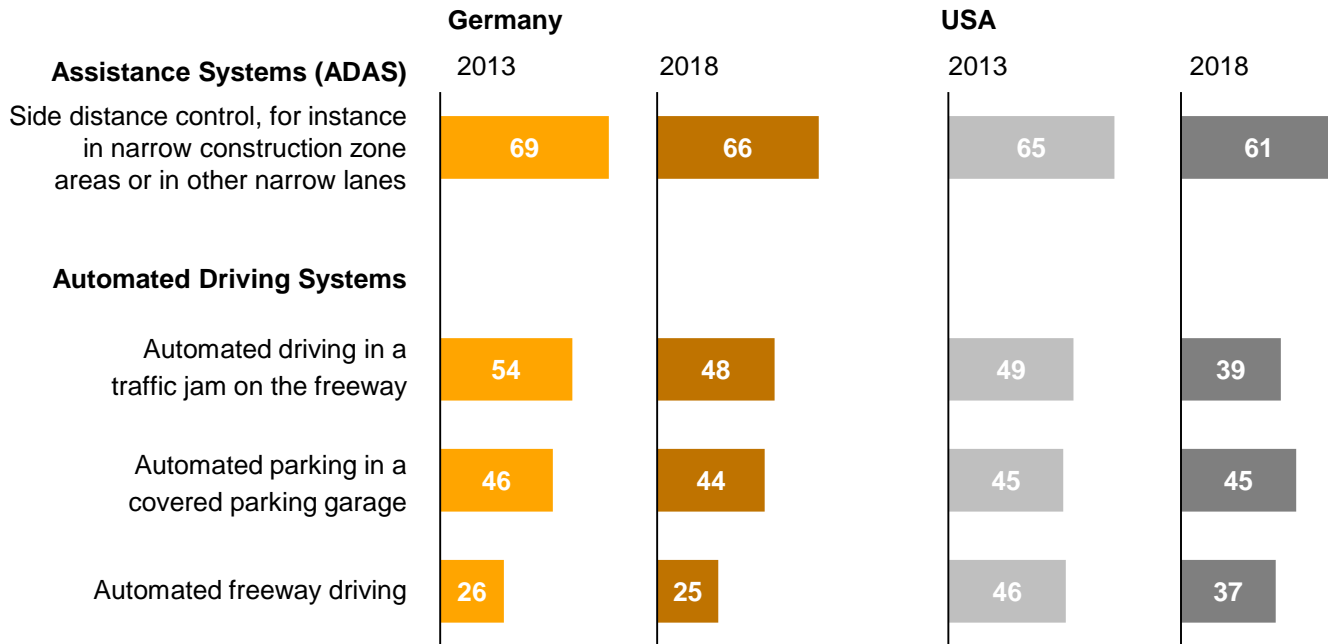





 Driver Representative

**Question:** Today's cars offer lots of technical equipment intended to support the driver. There will be additional technical assistance systems in the future. To what extent would you like to use the following systems in the future?

figures in percent, top box displayed (1 + 2), scale "1: definitely use that" to "4: definitely not use that"

# Intention to Use Automated Systems in the Future: Drivers in Germany and USA have become more sceptical



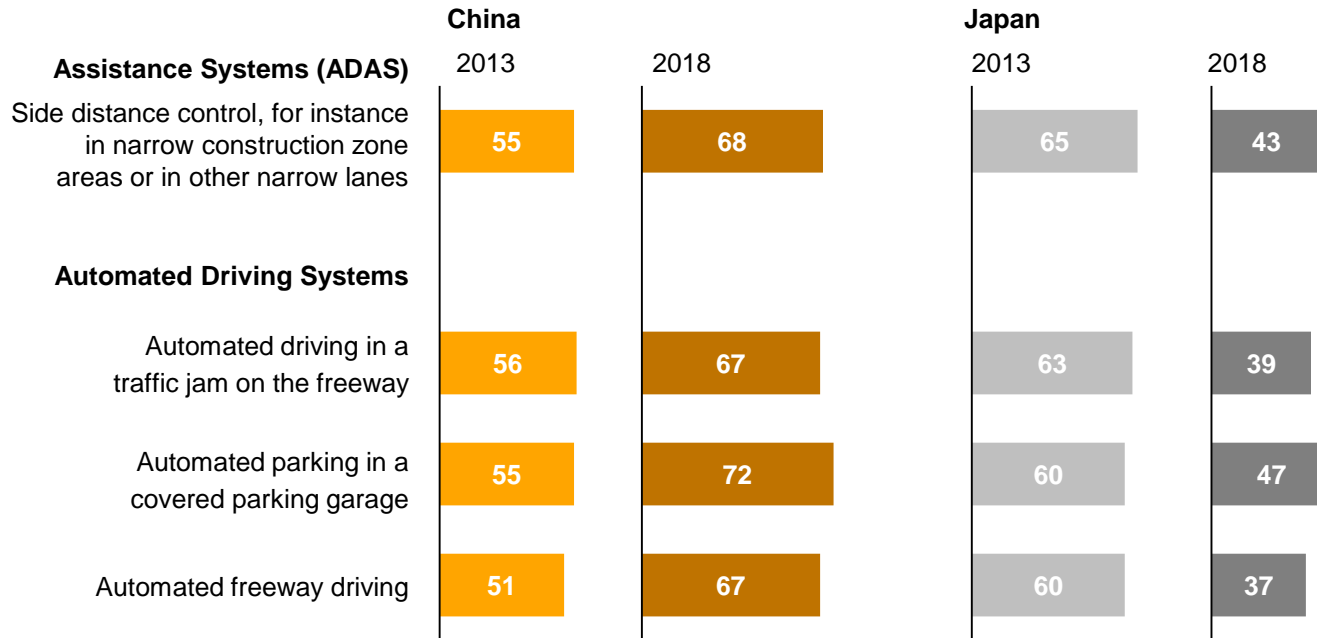
 time comparison  
 Driver  
 Representative


**Question:** Today's cars offer lots of technical equipment intended to support the driver. There will be additional technical assistance systems in the future. To what extent would you like to use the following systems in the future?


figures in percent, top box displayed (1 + 2), scale "1: definitely use that" to "4: definitely not use that"


# Intention to Use Automated Systems in the Future:

## Different trends in the answers from China and Japan



 time comparison

 Driver

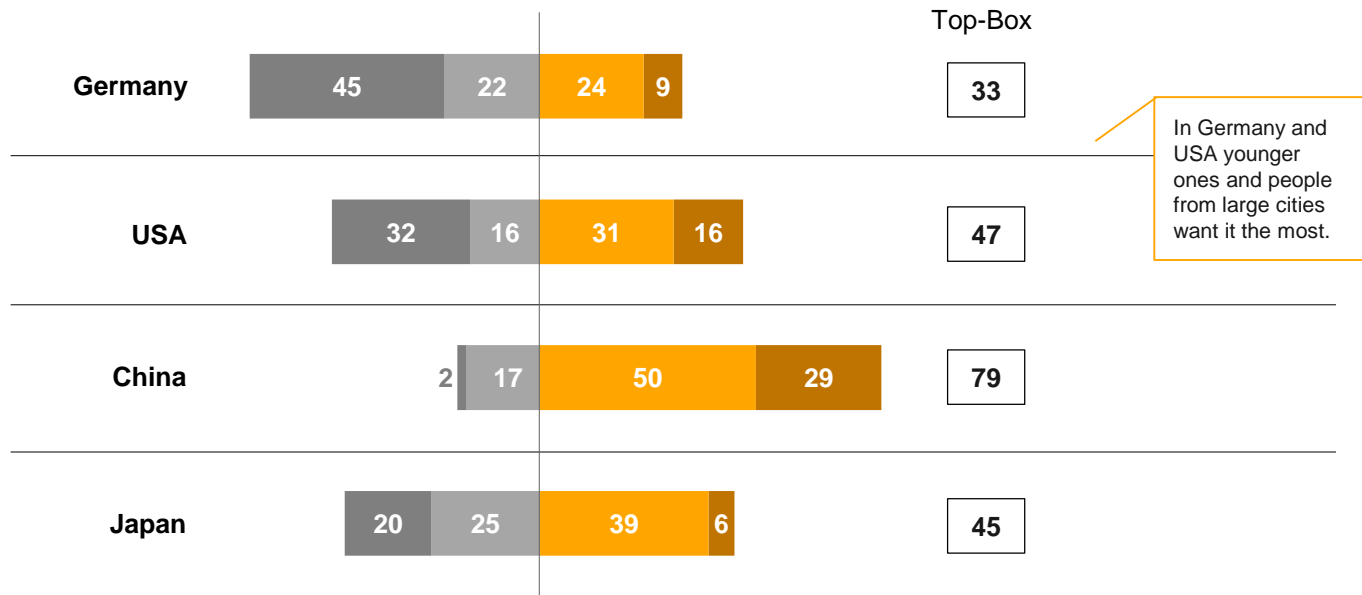
 Representative

**Question:** Today's cars offer lots of technical equipment intended to support the driver. There will be additional technical assistance systems in the future. To what extent would you like to use the following systems in the future?

figures in percent, top box displayed (1 + 2), scale "1: definitely use that" to "4: definitely not use that"



# Traveling Through the City in a “Robot Taxi”: People in China can imagine this more often than others



**R**epresentative

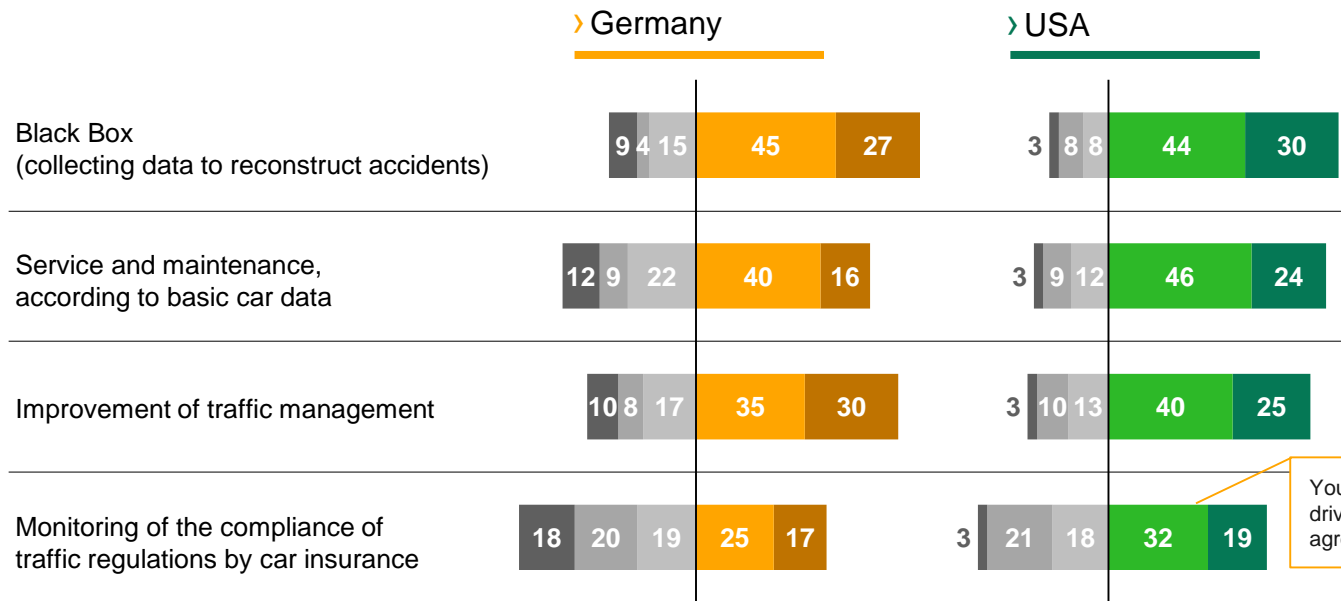
**Question:** Can you imagine traveling through the city in a 'robot taxi'? In other words, in a vehicle that travels through the streets without a driver? Is this something you would want?

- definitely
- maybe
- prefer not to have it
- definitely not

figures in percent, 2 to 10 % per country "don't know"

# Assessment of Connectivity Applications

# Assessment of Connectivity Applications: More sceptic only to the insurance aspect



**Driver**  
**R**epresentative

**Question:** The latest vehicles are connected to the internet and enable information exchange between the car and environment. How do you rate the following examples?

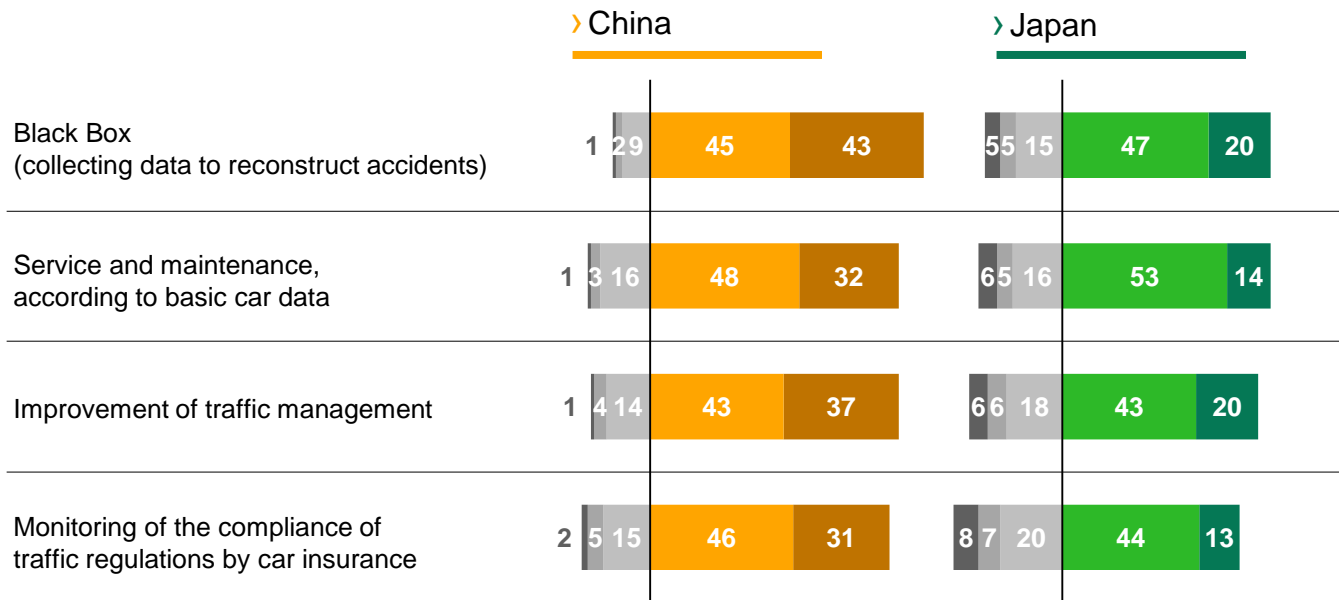
**Germany USA**

- very desirable
- desirable
- undesirable
- not at all desirable
- superfluous

Young drivers agree most.

figures in percent; "prefer not to answer" not displayed

# Assessment of Connectivity Applications: For Chinese drivers all very desirable



Driver  
 Representative

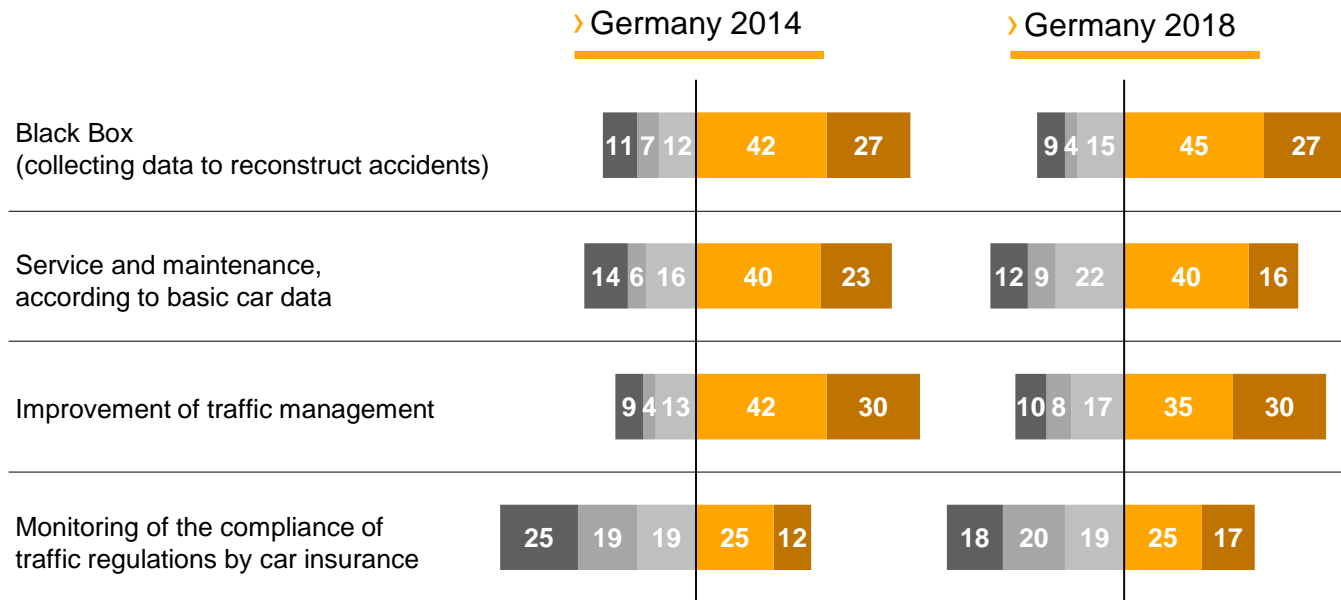
**Question:** The latest vehicles are connected to the internet and enable information exchange between the car and environment. How do you rate the following examples?

**China Japan**

- very desirable
- desirable
- undesirable
- not at all desirable
- superfluous

figures in percent; "prefer not to answer" not displayed

# Assessment of Connectivity Applications: In Germany nearly the same answers as 4 years ago



time comparison

Driver

Representative

**Question:** The latest vehicles are connected to the internet and enable information exchange between the car and environment. How do you rate the following examples?

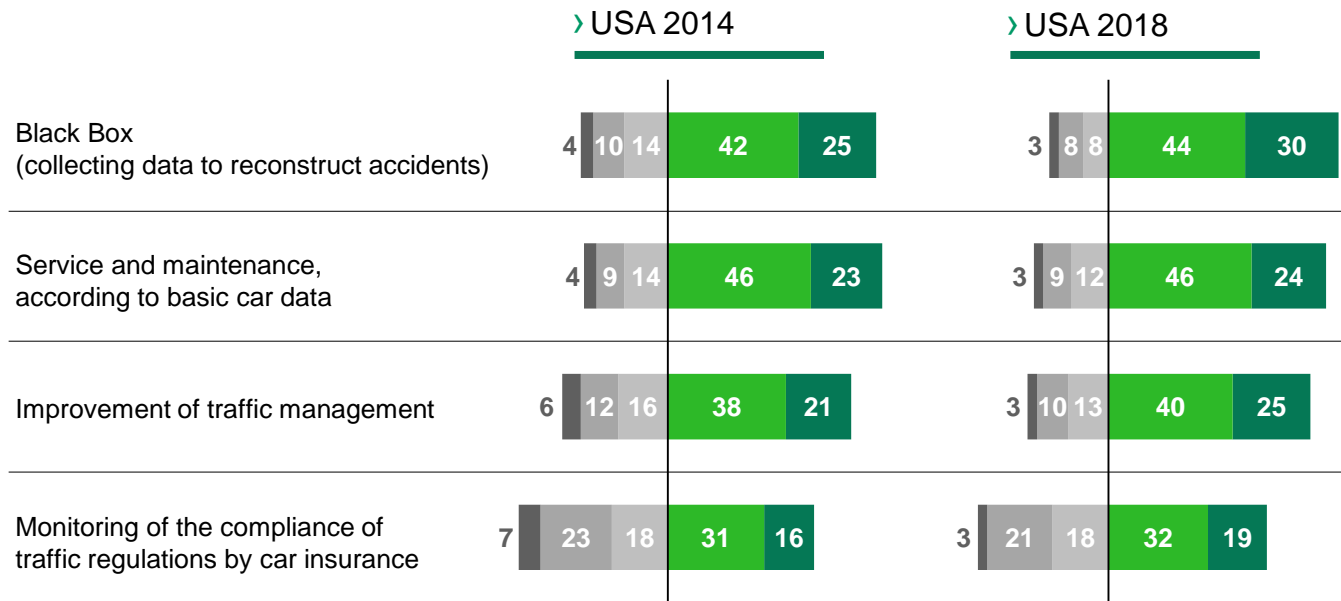
**Germany**

- very desirable
- desirable
- undesirable
- not at all desirable
- superfluous

figures in percent; "prefer not to answer" not displayed

# Assessment of Connectivity Applications:

## In the US also nearly the same answers like 2014



time comparison

Driver

Representative

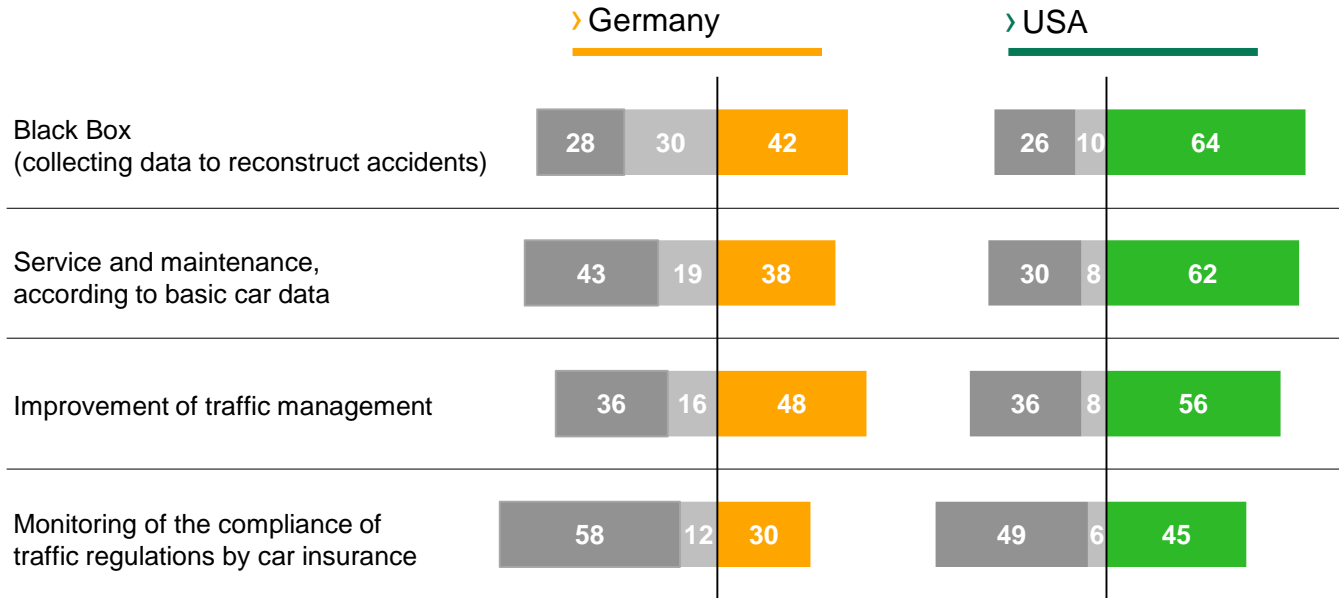
**Question:** The latest vehicles are connected to the internet and enable information exchange between the car and environment. How do you rate the following examples?

**USA**

- very desirable
- desirable
- undesirable
- not at all desirable
- superfluous

figures in percent; "prefer not to answer" not displayed

# Willingness to Transfer Personal Data for Connectivity: Low consent in Germany



Driver  
 Representative

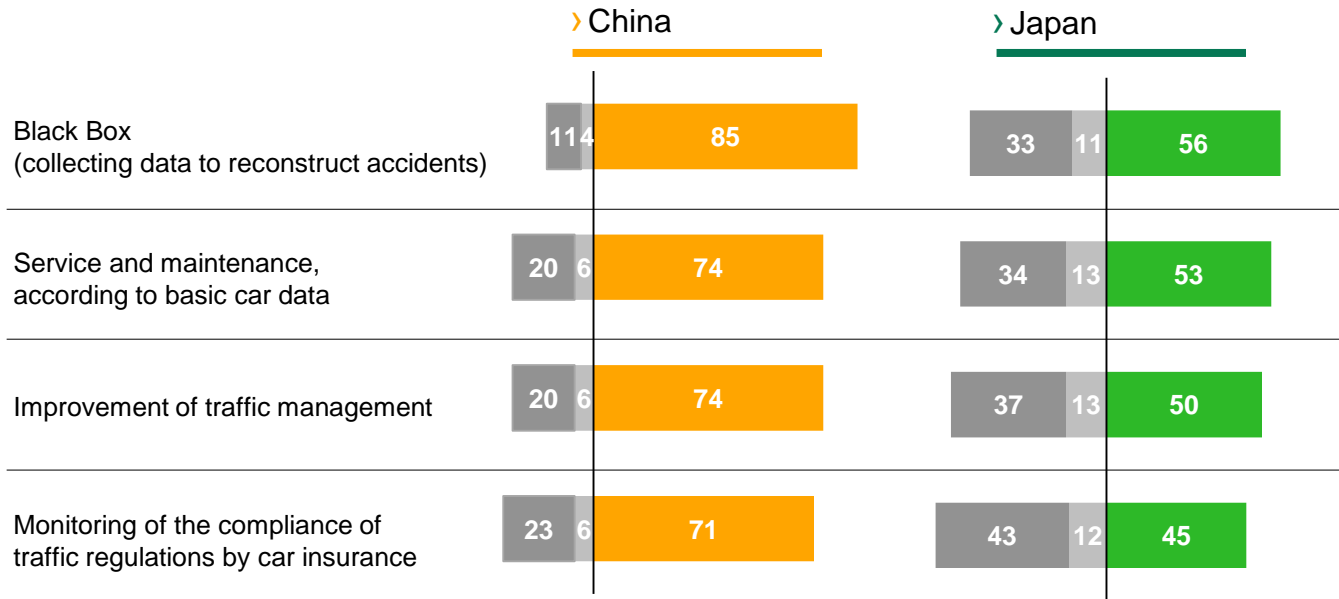
**Question:** In order for the respective services to function well you must give personal data to the service provider. Are you prepared to do this for the named applications?

**Germany USA**

- top box (approval)
- low box (no approval)
- no interest at all

figures in percent, scale "1: certainly approve" to "4: certainly not approve"

# Willingness to Transfer Personal Data for Connectivity: High approval in China



Driver  
 Representative

**Question:** In order for the respective services to function well you must give personal data to the service provider. Are you prepared to do this for the named applications?

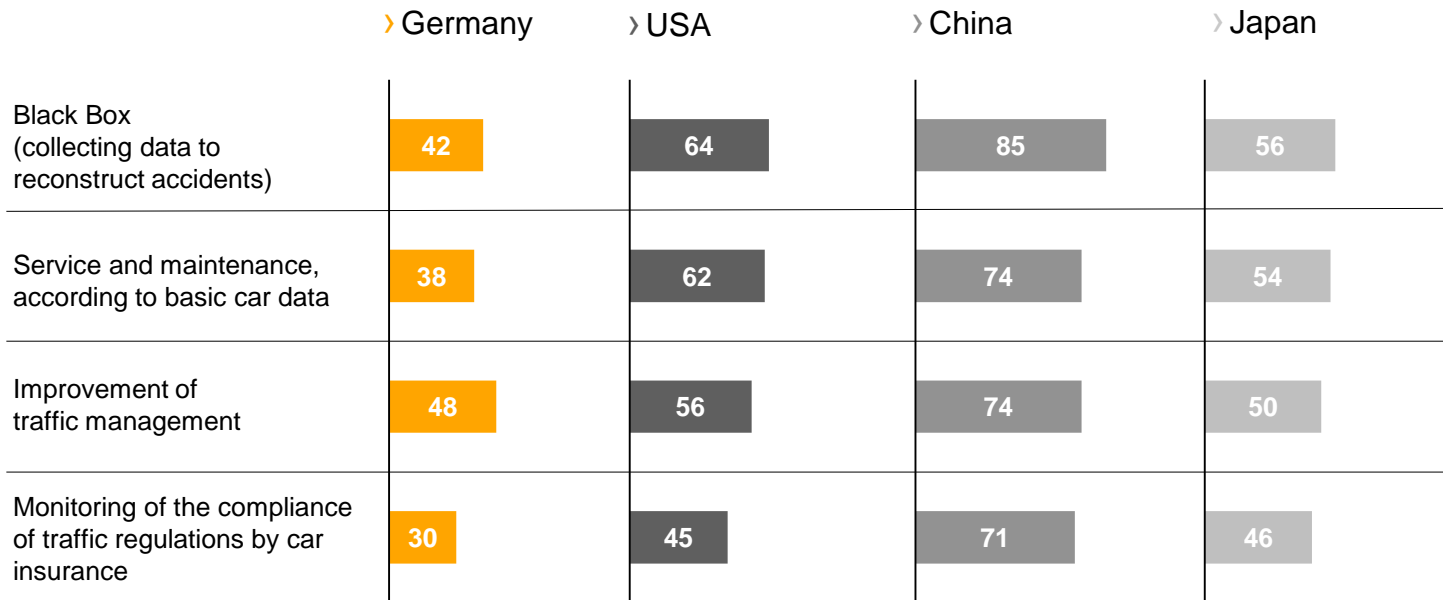
**China Japan**


- top box (approval)
- top box (approval)
- low box (no approval)
- low box (no approval)
- no interest at all
- no interest at all


figures in percent, scale "1: certainly approve" to "4: certainly not approve"



# Willingness to Transfer Personal Data for Connectivity: Different consent per country



 Driver

 Representative

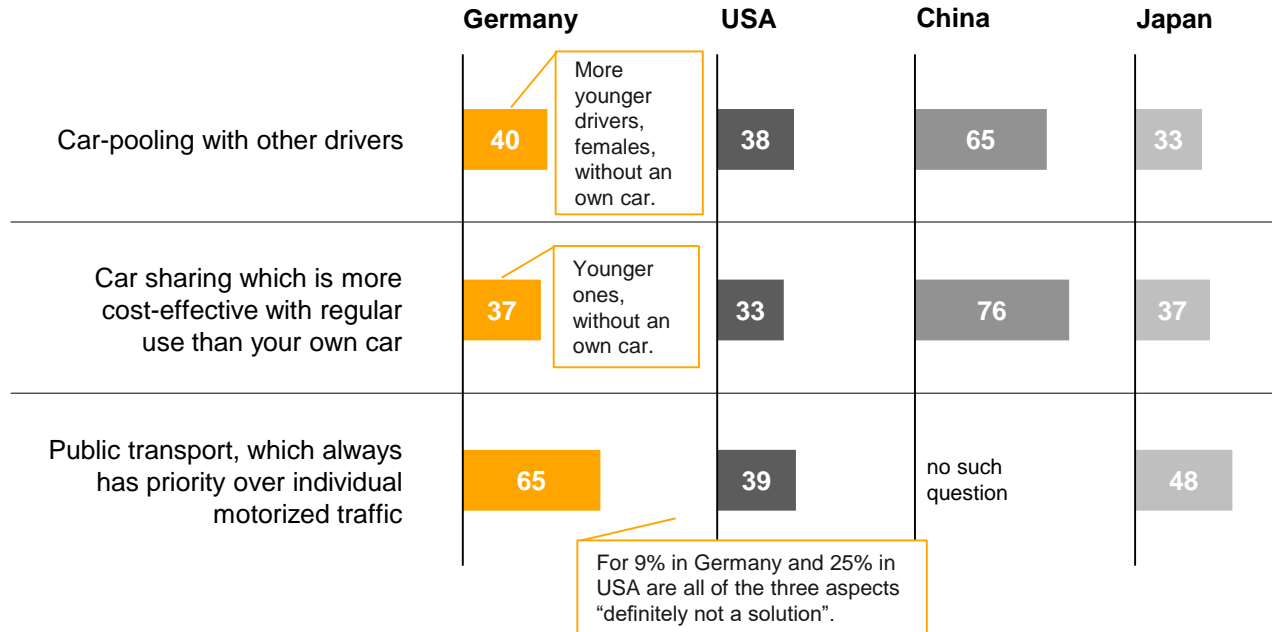
**Question:** In order for the respective services to function well you must give personal data to the service provider. Are you prepared to do this for the named applications?


figures in percent, top box displayed (1 + 2), scale "1: certainly approve" to "4: certainly not approve"


# Suitable Mobility Solutions

# Suitable Mobility Solutions from Drivers' Perspective:

## Most vote for public transport with priority



 Driver

 Representative

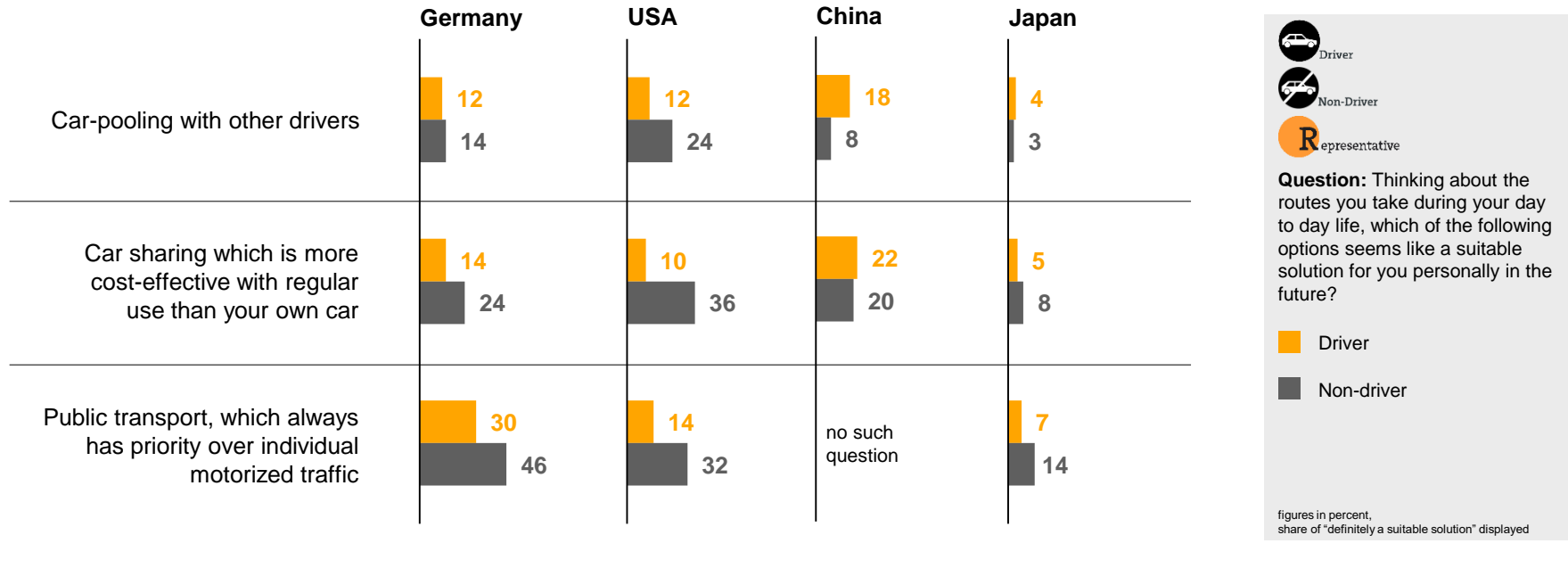
**Question:** Thinking about the routes you take during your day to day life, which of the following options seems like a suitable solution for you personally in the future?

*Especially in Germany, USA and Japan less agreement to all statements in small cities and rural areas.*

figures in percent, top box displayed (1 + 2), scale "1: definitely a suitable solution" to "4: definitely not a suitable solution"

# Suitable Mobility Solutions – Drivers and Non-Drivers:

## Drivers' point of view is less optimistic, except in China

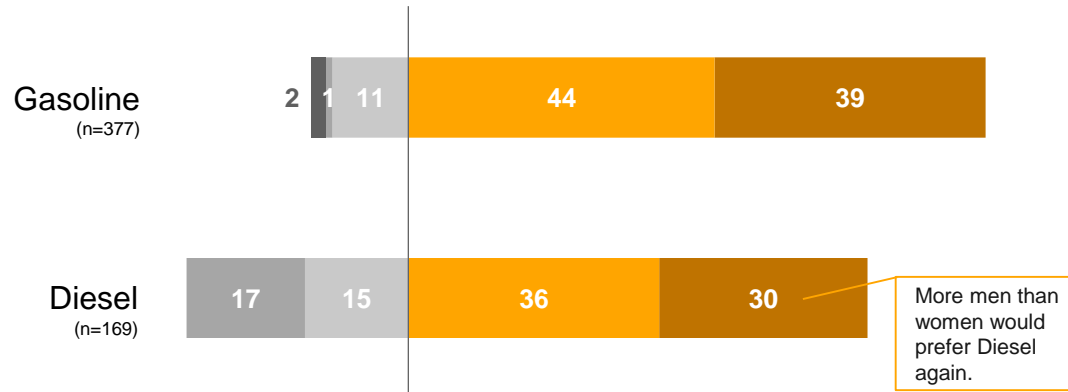



# Purchase of Cars in all four Countries and Diesel Crisis in Germany


# Purchase of a Car in the Future – Germany:

## Drivers of Diesel cars are less sure of buying such again






### Germany



 Driver

 Representative

**Question:** Would you buy a vehicle with the same type of drive configuration as your current one in the future?

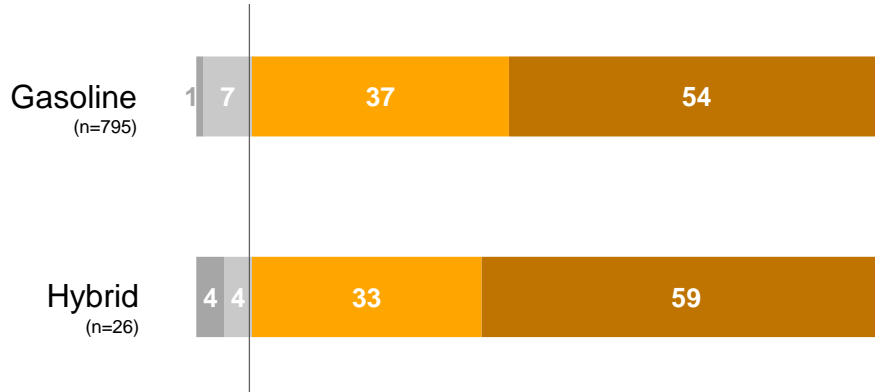
-  certainly
-  probably
-  probably not
-  certainly not
-  do not plan to buy a car

figures in percent, "don't know" not displayed

# Purchase of a Car in the Future – USA:


## More than every second driver certainly will buy same drive


USA







### Hybrid drive:

In USA and Japan more drivers in large cities and with a good own economic situation use hybrid.

 Driver

 Representative

**Question:** Would you buy a vehicle with the same type of drive configuration as your current one in the future?

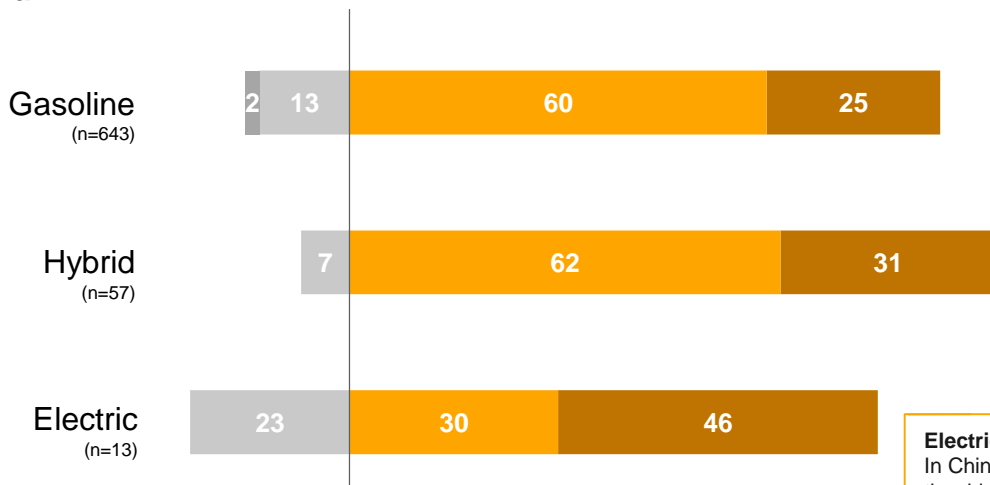
-  certainly
-  probably
-  probably not
-  certainly not

figures in percent, "prefer not to answer" not displayed



# Purchase of a Car in the Future – China:

## More drivers of hybrid and electric will certainly buy the same





China



**Electric drive:**  
In China (2%) and USA (1%)  
the drivers are younger ones,  
with good economic situation.

 Driver  
 Representative

**Question:** Would you buy a vehicle with the same type of drive configuration as your current one in the future?

-  certainly
-  probably
-  probably not
-  certainly not

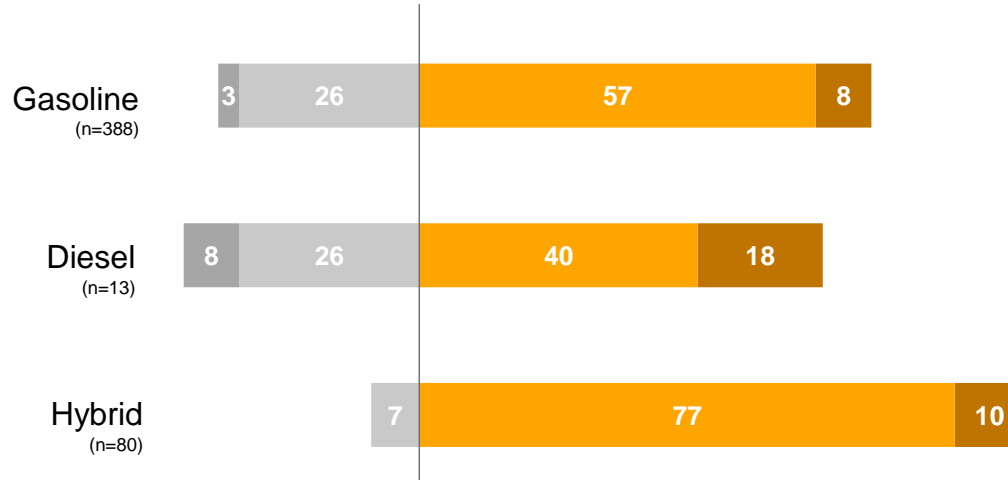
figures in percent, "prefer not to answer" not displayed



# Purchase of a Car in the Future – Japan:

## Hybrid with most potential?

### Japan



Driver



Representative

**Question:** Would you buy a vehicle with the same type of drive configuration as your current one in the future?

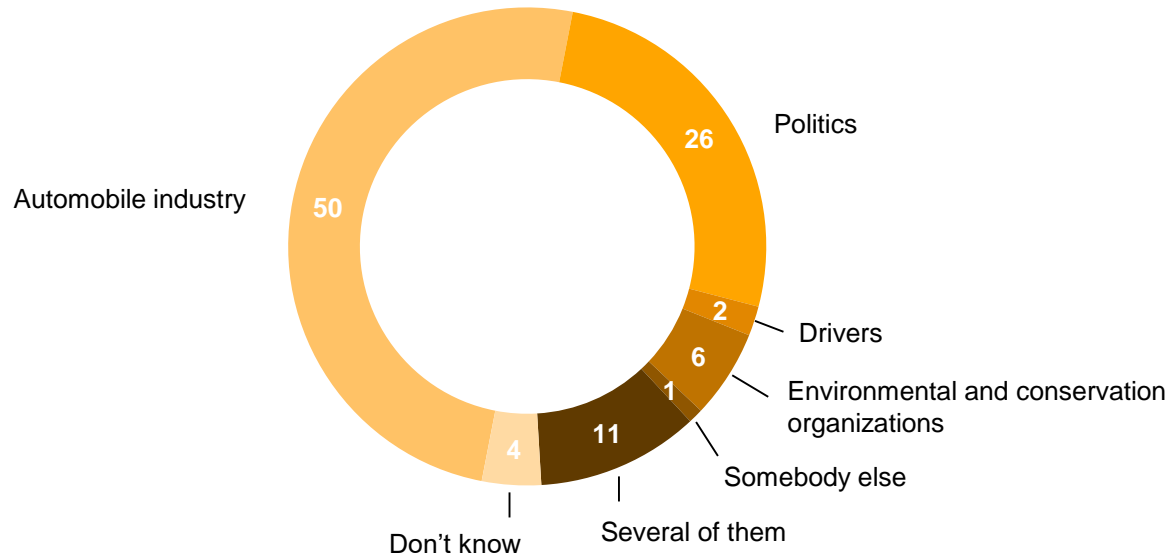
- certainly
- probably
- probably not
- certainly not

figures in percent, "prefer not to answer" not displayed

# Most likely to blame for the Diesel Crisis – Germany:

## For only half of the people automobile industry did cause it

Germany



**R**epresentative

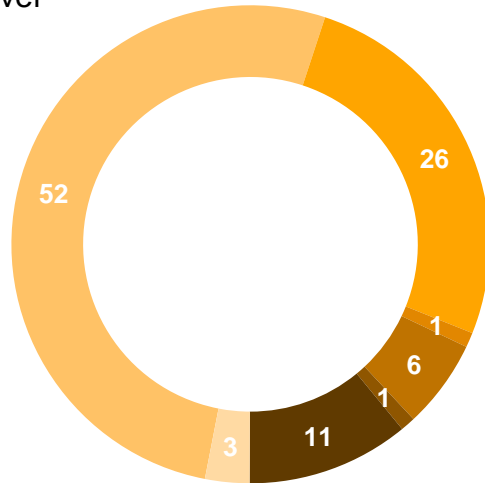
**Question:** A lot has been reported in the media recently about the diesel crisis. Who do you think is most likely to blame for this diesel crisis?

figures in percent

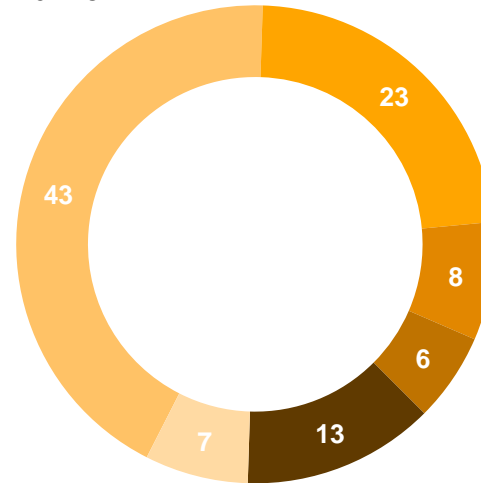
# Most likely to blame for the Diesel Crisis – Germany: Non-drivers and drivers




## Germany

### Driver



### Non-driver



 Driver  
 Non-Driver  
 Representative

**Question:** A lot has been reported in the media recently about the diesel crisis. Who do you think is most likely to blame for this diesel crisis?

- automobile industry
- politics
- drivers
- environmental and conservation organizations
- somebody else
- several of them
- don't know

figures in percent